QUICK START MANAGEMENT GUIDE FOR BALLOT PREPARATION/PRINTING AND PRE-ELECTION TESTING

The Quick Start Management Guide for Ballot Preparation/Printing and Pre-Election Testing is a snapshot of processes and procedures for local election administrators to use for ballot preparation and logic and accuracy testing. It is not intended to be a comprehensive management tool but a guide that assists election officials with some of their most critical tasks—formatting and printing ballots and programming and testing voting systems. A comprehensive set of Management Guidelines is under development and will be released in modules in 2007 and 2008.

Ballot Preparation/Printing

- Review the voting system documentation before beginning ballot design and layout. Take time to understand the significance of the placement of ovals, folds, timing marks, and precinct/ballot style identifiers. Example: *If the ballot is folded on the ovals, it may impact the scanner's ability to read the ballot.*

- Develop procedures for recording the audio ballot. Listen to all candidates' names and contests to ensure that the pronunciation is correct. In addition, jurisdictions offering ballots in languages other than English should develop procedures for reviewing the pronunciation of candidates' names and contests in the alternate language(s). Tip: *Ask candidates to record the pronunciation of their names when they file for office.*

- Confirm that ballots conform to all applicable State laws relating to the order/rotation of candidates' names, placement and wording of contest headers, font size of contest headers, and other issues. Example: *Some States require that ballots be printed with a State seal. Be aware that any printing that appears in the scanner "read area" could be read as a vote or an unrecognized candidate name. Printing the seal in a gray tone can reduce this possibility.*

- Require that several people proof all ballots at each stage of the design and production processes—during initial layout, when the printer delivers proofs of the ballot, and when the printer delivers the printed ballots. In addition, proof each ballot

style on the voting machine and on the audio ballot. Tip: *Ask staff members from another department to help proof the ballots.*

- Reproof ballots after changes or corrections are made. Be aware that any change made to the paper ballot also requires changing and reproofing of the voting machine and audio ballots.

- Review State laws and administrative procedures to ensure the uniformity of voters instructions for marking the ballot. Remember to include specific instructions, if required, for ballot marking devices (e.g., black, blue, or red ink; pencils; felt-tip markers;).

- Use vendor-certified or pre-qualified printing companies. Your contract should include details about paper stock quality and weight, ink density, and other printing specifications. Ask your print vendor to provide you with a copy of its internal quality control procedures. Example: *If the ink density on the ballot is too light, the scanner may have difficulty reading the timing marks. The weight of the ballot paper stock may cause the scanner to jam frequently.*

- To ensure that the ink density is consistent on all ballots, pull ballots from the top, middle, and bottom of the test deck stack.

- Immediately conduct a logic and accuracy test when the ballots arrive from the printer. This test must be successfully completed and validated before mailing and/or distributing in-person absentee and/or early ballots to voters.

- Store the ballots in an air-conditioned and humidity-controlled environment to prevent the ballot stock from absorbing water.

- Test ballots printed "on demand" before distributing them to voters to confirm that the scanners are able to read the timing marks.

- Develop a "Plan B" in the event that the printed ballots are not delivered on time. Example: *Make copies of your ballot proofs in your office, initial or stamp these copies, and maintain a log to record the ballot style and quantity duplicated. Votes cast on these ballots may need to be hand counted or duplicated onto the appropriate paper stock for your ballot-scanning device.*

Pre-Election Testing—Hardware

- Test all components of your voting system before every election. Test scanners, voting machines, encoders, electronic poll books, printers, dials, buttons, card readers, scanner heads, modems, and exterior of voting booths. Example: *If your ballot cards/supervisor cards are encoded with a specific election ID, they must be retested before each election.*

- Develop an internal checklist as part of your pre-election audit trail. Require each staff member to date and initial the checklist after completing each specific test.

- Be aware that many voting system components, such as voting equipment, memory cards, and encoders, contain batteries. Develop an understanding of the expected life of the batteries and have a plan in place to manage battery replacement on Election Day.

- Make a backup server available for election night tabulation purposes. Include system tests of your servers in your pre-election testing procedures. If modems are used, conduct stress tests on the servers in an environment in which all modems receive data at the same time.

- Use a diagnostic card for testing each precinct/central count optical scanner to ensure that the scanner heads are reading properly. Tip: *A can of air spray is a simple, preventive maintenance tool that keeps paper dust from collecting during scanning.*

- The calibration of optical scanners may need to be periodically checked, serviced, and/or cleaned by the vendor to check the sensitivity of the visual light readers to marks on the paper, the type of marker used, and other factors.

- Establish testing procedures to determine the length of time that the voting machines will operate on battery power. Be aware that the batteries may last for a shorter period of time when using the paper trail attachment. Tip: *Train your poll workers to plug a nightlight into the power outlet the last machine in the daisy chain is connected to verify that the machines are receiving electricity on Election Day.*

Pre-Election Testing—Software Logic and Accuracy

- Prepare test decks to conduct logic and accuracy testing of the printed paper ballots. If you are using a vendor-generated test deck, supplement the test deck with blank ballots and ballots that have been overvoted, undervoted, and hand marked with dots, checkmarks, and X's to check the sensitivity of the scanner heads.

- Review State laws and administrative procedures regarding the types of logic and accuracy tests required. Examples: (1) single-vote test deck in which a vote is cast for every position on every ballot style; (2) random-vote test deck ("real world" voting), which checks the readability of hand marked dots, X's, and checkmarks and different marking devices (e.g., blue, black, or red ink; pencils; felt-tip markers); (3) pattern-vote test deck in which the expected vote for each contest is a "3, 2, 1" vote pattern; and (4) special test deck, which includes scenarios for multivote, straight-party, and split-party voting.

- Test each precinct count optical scanner using the memory card specific to that location on Election Day. Internal procedures should follow State guidelines and include collecting a test deck of ballots for that polling place, printing a zero report,

scanning the test deck, printing the results tape, validating the results, zeroing out the memory card, and setting the scanner for the election. A checklist should be completed and signed for each scanner as part of your pre-election audit trail.

- Test your central count optical scanning equipment using all ballot styles and following the same procedures as those used for your precinct count optical scanners. If you are using more than one central count optical scanner, be sure to run the same test deck on all scanners. ***Note***: This logic and accuracy test must be completed and validated before mailing or distributing ballots.

- Understand how the voting system will tabulate a multipage paper ballot: Will it count each page as a vote cast, or will one of the pages be designated as the "counter" page? If one of the pages will be designated as the counter page, which page will it be? What are your internal procedures if the voter does not return all ballot pages?

- Follow State guidelines for conducting logic and accuracy testing on your voting machines before each election. The testing pattern may include manual logic and accuracy testing and/or automatic logic and testing. Testing patterns should be similar to the tests performed on the paper ballot deck (e.g., single-vote, pattern-vote). Test the audio ballot and the "cancel ballot" function. Collect all checklists and paper tapes from each machine as part of your pre-election audit trail.

- Check the date and time on each voting machine. Tip: *Roll the date and time forward to Election Day on several machines before performing the logic and accuracy test to ensure that the equipment will work correctly on a specific date and time.*

- Finalize the logic and accuracy testing by entering all test votes from the optical scanner and voting machine systems into the central tabulation computer to validate expected outcomes. Review summary reports to verify accuracy. Back up the database and store and seal the test decks, checklists, and other related pre-election audit trail documentation.

- Manage the pre-election testing by implementing chain-of-custody procedures and two-person checks and balances throughout the process. Example: *One staff person records each machine's protective counter number, serial number, and tamper-resistant seal and tape number, and another staff person proofs the numbers and signs off on the transfer report.*